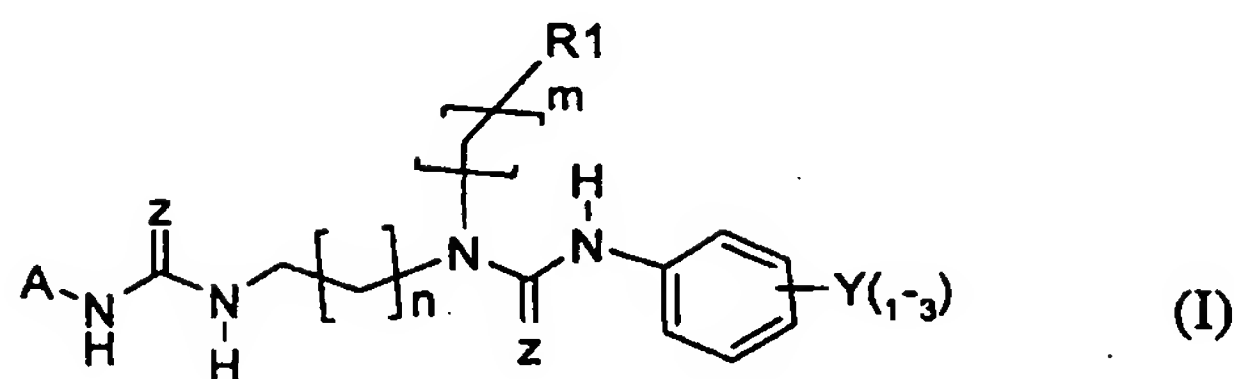


CLAIMS

1. A compound of the general formula I



10

wherein

A is Ph-Y₍₁₋₃₎ or Ar-X₍₀₋₂₎;

15 R1 is selected from dimethylamino, diethylamino, diisopropylamino, pyrrolidino, piperidino, and 4-methylpiperazino;

Ar is selected from phenyl, 1-naphtyl, 2-naphtyl, 2-pyridyl, 3-pyridyl, 4-pyridyl, 6-quinolinyl, and 5-pyrimidinyl;

20 X₍₀₋₂₎ represents 0 to 2 substituents selected from C1-C6 branched or unbranched alkyls, C1-C6 branched or unbranched alkyloxy, C1-C6 branched or unbranched acyls, fluoro, chloro, bromo, trifluoromethyl, dimethylamino, diethylamino and trifluoromethoxy;

25 Y₍₁₋₃₎ represents 1 to 3 substituents selected from fluoro, chloro, bromo, dimethylamino, diethylamino, trifluoromethyl, and methoxy;

Z is O or S;

n is 1-3; and

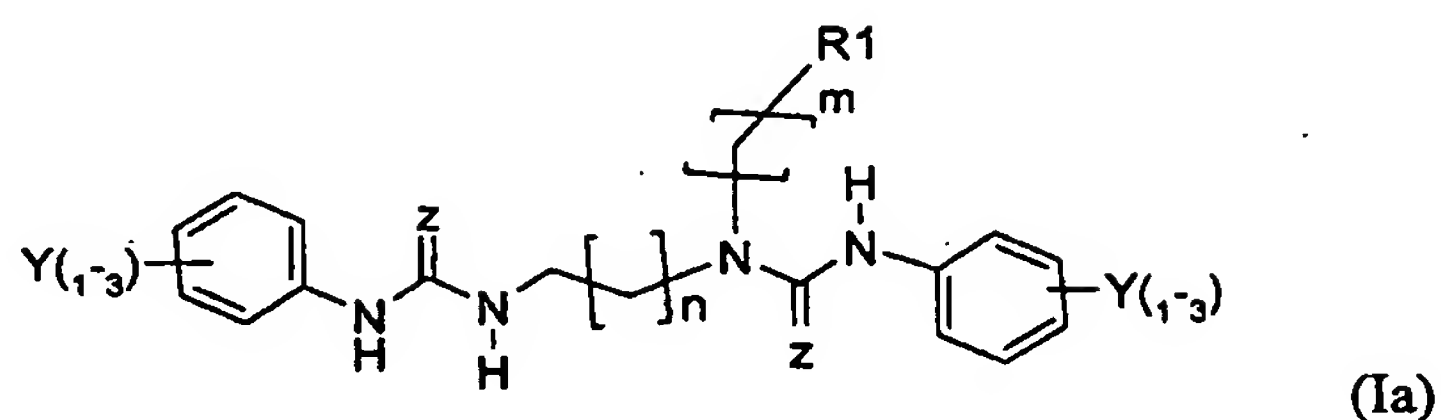
m is 2-4, or

30 pharmaceutically acceptable salts of the compounds of the general formula I.

35

2. A compound according to claim 1 having the general formula Ia

5



wherein

10 R1 is selected from dimethylamino, diethylamino, diisopropylamino, pyrrolidino, piperidino, and 4-methylpiperazino;

Y₍₁₋₃₎ represents 1 to 3 substituents selected from fluoro, chloro, bromo, dimethylamino, diethylamino, tri-
15 fluoromethyl, and methoxy;

Z is O or S;

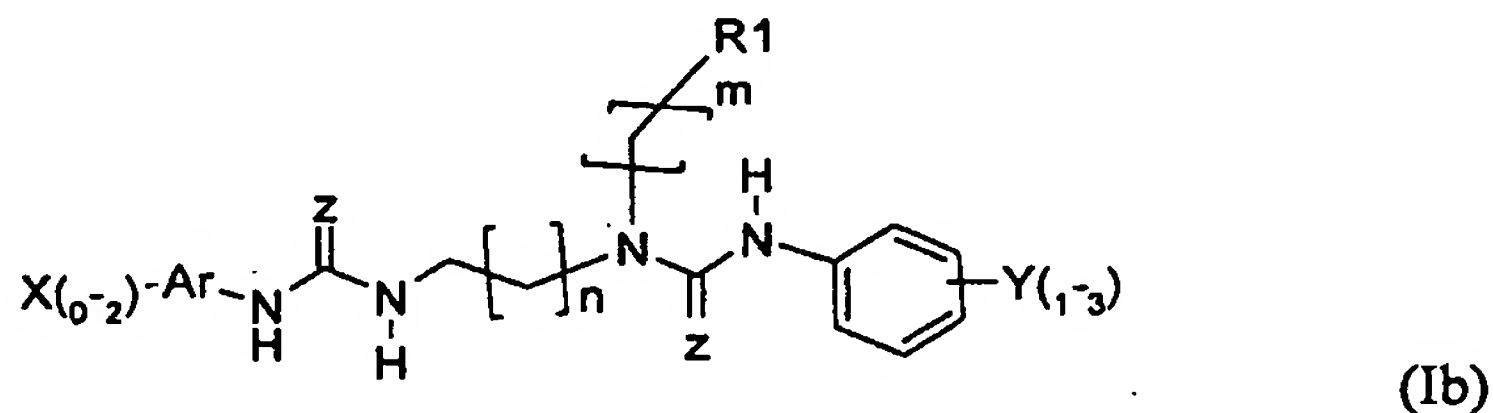
n is 1-3; and

m is 2-4, or

pharmaceutically acceptable salts of the compounds of the
20 general formula Ia.

3. A compound according to claim 1 having the general formula Ib

25



30 wherein

R1 is selected from dimethylamino, diethylamino, diisopropylamino, pyrrolidino, piperidino, and 4-methylpiperazino;

Ar is selected from phenyl, 1-naphtyl, 2-naphtyl, 2-pyridyl, 3-pyridyl, 4-pyridyl, 6-quinolinyl, and 5-pyrimidinyl;
35

$X_{(0-2)}$ represents 0 to 2 substituents selected from C1-C6 branched or unbranched alkyls, C1-C6 branched or unbranched alkyloxy, C1-C6 branched or unbranched acyls, fluoro, chloro, bromo, trifluoromethyl, dimethylamino, diethylamino and trifluoromethoxy;

$Y_{(1-3)}$ represents 1 to 3 substituents selected from fluoro, chloro, bromo, dimethylamino, diethylamino, trifluoromethyl, and methoxy;

Z is O or S;

n is 1-3; and

m is 2-4, or

pharmaceutically acceptable salts of the compounds of the general formula Ib.

4. A compound according to any one of claims 1-3, wherein

R1 is selected from dimethylamino, diethylamino, diisopropylamino, pyrrolidino, piperidino, 4-methyl-piperazino;

n is selected from 1 and 2;

m is selected from 2 and 3;

$Y_{(1-3)}$ is one substituent selected from fluoro, chloro, bromo, trifluoromethyl, dimethylamino and diethylamino.

5. A compound according to any one of claims 1 and 3-4, wherein

Ar is selected from phenyl, 2-naphtyl and 4-pyridyl,

n is selected from 1 and 2;

m is selected from 2 and 3;

$Y_{(1-3)}$ is one of the substituents selected from fluoro, chloro, bromo, and trifluoromethyl.

6. A compound according to any one of claims 1-5 chosen from the group comprising

1-(2-Diethylamino-ethyl)-3-(3-trifluoromethyl-phenyl)-1-{2-[3-(3-trifluoromethyl-phenyl)-ureido]-ethyl}-urea;

- 1-(2-Diethylamino-ethyl)-3-(4-trifluoromethyl-phenyl)-1-{2-[3-(3-trifluoromethyl-phenyl)-ureido]-ethyl}-urea;
- 1-(2-Pyrrolidin-1-yl-ethyl)-3-(4-trifluoromethyl-phenyl)-
5 1-{2-[3-(4-trifluoromethyl-phenyl)-ureido]-ethyl}-urea;
- 3-(4-Chloro-phenyl)-1-{2-[3-(4-chloro-phenyl)-ureido]-ethyl}-1-(2-pyrrolidin-1-yl-ethyl)-urea;
- 10 1-{2-[3-(3-Chloro-phenyl)-1-(2-piperidin-1-yl-ethyl)-ureido]-ethyl}-3-(3-trifluoromethyl-phenyl)-urea;
- 1-(2-[3-(4-Chloro-phenyl)-ureido]-ethyl)-1-(2-dimethyl-amino-ethyl)-3-(4-trifluoromethyl-phenyl)-urea;
15 3-(4-Bromo-phenyl)-1-{2-[3-(4-bromo-phenyl)-ureido]-ethyl}-1-(2-dimethylamino-ethyl)-urea;
- 1-(2-Diethylamino-ethyl)-1-[2-(3-phenyl-ureido)-ethyl]-3-
20 (4-trifluoromethyl-phenyl)-urea;
- 1-(2-Piperidin-1-yl-ethyl)-3-(3-trifluoromethyl-phenyl)-1-{2-[3-(3-trifluoromethyl-phenyl)-ureido]-ethyl}-urea;
- 25 1-(2-Piperidin-1-yl-ethyl)-3-(4-trifluoromethyl-phenyl)-1-{2-[3-(3-trifluoromethyl-phenyl)-ureido]-ethyl}-urea;
- 1-{2-[1-(2-Pyrrolidin-1-yl-ethyl)-3-(4-trifluoromethyl-phenyl)-ureido]-ethyl}-3-(3-trifluoromethyl-phenyl)-urea;
30 1-{2-[3-(4-Bromo-phenyl)-1-(2-diethylamino-ethyl)-ureido]-ethyl}-3-(2,6-dichloro-pyridin-4-yl)-urea;
- 3-(4-Chloro-phenyl)-1-{2-[3-(4-chloro-phenyl)-ureido]-ethyl}-1-(2-diethylamino-ethyl)-urea;
35

1-(2-Dimethylamino-ethyl)-3-(4-trifluoromethyl-phenyl)-1-
{2-[3-(3-trifluoromethyl-phenyl)-ureido]-ethyl}-urea;

1-(2-Diethylamino-ethyl)-3-(3-fluoro-phenyl)-1-{2-[3-(3-
5 fluoro-phenyl)-ureido]-ethyl}-urea;

1-{2-[1-(3-Pyrrolidin-1-yl-propyl)-3-(4-trifluoromethyl-
phenyl)-ureido]-ethyl}-3-(4-trifluoromethyl-phenyl)-urea;

10 1-{2-[3-(4-Chloro-phenyl)-ureido]-ethyl}-1-(2-diethyl-
amino-ethyl)-3-(4-trifluoromethyl-phenyl)-urea;

1-{2-[3-(4-Chloro-phenyl)-ureido]-ethyl}-1-(2-diisopro-
pylamino-ethyl)-3-(4-trifluoromethyl-phenyl)-urea;

15

1-{2-[3-(4-Chloro-phenyl)-ureido]-ethyl}-1-(2-piperidin-
1-yl-ethyl)-3-(4-trifluoromethyl-phenyl)-urea;

1-(4-Chloro-phenyl)-3-{2-[3-(4-chloro-phenyl)-1-(2-
20 diethylamino-ethyl)-thioureido]-ethyl}-thiourea;

1-{2-[3-(4-Bromo-phenyl)-ureido]-ethyl}-1-(2-diisopro-
pylamino-ethyl)-3-(4-trifluoromethyl-phenyl)-urea;

25 1-(4-Chloro-phenyl)-3-{2-[1-(2-pyrrolidin-1-yl-ethyl)-3-
(4-trifluoromethyl-phenyl)-ureido]-ethyl}-urea;

1-{2-[3-(4-Bromo-phenyl)-ureido]-ethyl}-1-(3-diethyl-
amino-propyl)-3-(4-trifluoromethyl-phenyl)-urea;

30

1-(2-Dimethylamino-ethyl)-1-{2-(3-phenyl-ureido)-ethyl}-
3-(4-trifluoromethyl-phenyl)-urea;

1-(2-Diethylamino-ethyl)-3-(4-trifluoromethyl-phenyl)-1-
35 {2-[3-(4-trifluoromethyl-phenyl)-ureido]-ethyl}-urea;

1-(4-Bromo-phenyl)-3-{3-[1-(2-pyrrolidin-1-yl-ethyl)-3-(4-trifluoromethyl-phenyl)-thioureido]-propyl}-urea;

1-(2-Diisopropylamino-ethyl)-1-[2-(3-phenyl-ureido)-ethyl]-3-(4-trifluoromethyl-phenyl)-urea;

3-(4-Chloro-phenyl)-1-(2-pyrrolidin-1-yl-ethyl)-1-{2-[3-(3-trifluoromethyl-phenyl)-ureido]-ethyl}-urea;

10 1-(4-Chloro-phenyl)-3-{2-[3-(3-methoxy-phenyl)-1-(2-piperidin-1-yl-ethyl)-thioureido]-ethyl}-thiourea;

3-(4-Chloro-phenyl)-1-(2-pyrrolidin-1-yl-ethyl)-1-{2-[3-(4-trifluoromethyl-phenyl)-ureido]-ethyl}-urea;

15 1-{2-[3-(3-Chloro-phenyl)-ureido]-ethyl}-1-(3-diethyl-amino-propyl)-3-(4-trifluoromethyl-phenyl)-urea; and

1-(2-Diisopropylamino-ethyl)-3-(4-trifluoromethyl-phenyl)-1-{2-[3-(4-trifluoromethyl-phenyl)-ureido]-ethyl}-urea.

7. A compound according to any one of claims 1-6 for use as a medicament.

8. Use of a compound according to any one of claims 1-6 for the manufacturing of a medicament for the treatment of immune disorders which benefit from inhibition of production of IL-2 and other pro-inflammatory cytokines and/or induction of apoptosis in activated T-cells.

9. Use according to claim 8, wherein the immune disorders are chosen from the group comprising inflammatory diseases, autoimmune diseases, organ and bone marrow transplant rejection and other disorders associated with pro-inflammatory cytokines, especially IL-2, mediated immune response and defective cell regulation.

35 10. Use according to claim 8 or 9, wherein the immune disorders are chosen from the group comprising acute or chronic inflammation, rheumatoid arthritis,

multiple sclerosis, type-1 diabetes, inflammatory bowel disease, psoriasis, graft versus host disease and malignant neoplastic disease.

11. A pharmaceutical composition comprising a compound according to any one of claims 1-6, admixed with one or more pharmaceutically acceptable excipients or carriers.

12. A pharmaceutical composition according to claim 11, wherein the excipients are chosen from the group comprising filling agents, lubricants, flavours, colourings, sweetenings, buffers, acidifying agents, diluents and preservatives.

13. A pharmaceutical composition according to any one of claims 10-12, which is administered orally, intramuscularly, intravenously, intraperitoneally or subcutaneously, via implants, rectally, intranasally, transdermally, topically, or parenterally.

14. A method of treatment comprising administration of a pharmaceutically effective amount of compound according to claim 1-6 or a pharmaceutical composition according to claim 11-13 to a subject suffering from an immune disorder which benefit from inhibition of production of IL-2 and other pro-inflammatory cytokines and/or induction of apoptosis in activated T-cells.

15. A method of treatment according to claim 14, wherein the immune disorder are chosen from the group comprising inflammatory diseases, autoimmune diseases, organ and bone marrow transplant rejection and other disorders associated with pro-inflammatory cytokines, especially IL-2, mediated immune response and defective cell regulation.

16. A method of treatment according to claim 14 or 15, wherein the immune disorders are chosen from the group comprising acute or chronic inflammation, rheumatoid arthritis, multiple sclerosis, type-1 diabetes, inflammatory bowel disease, psoriasis, graft versus host disease and malignant neoplastic disease.

1/1

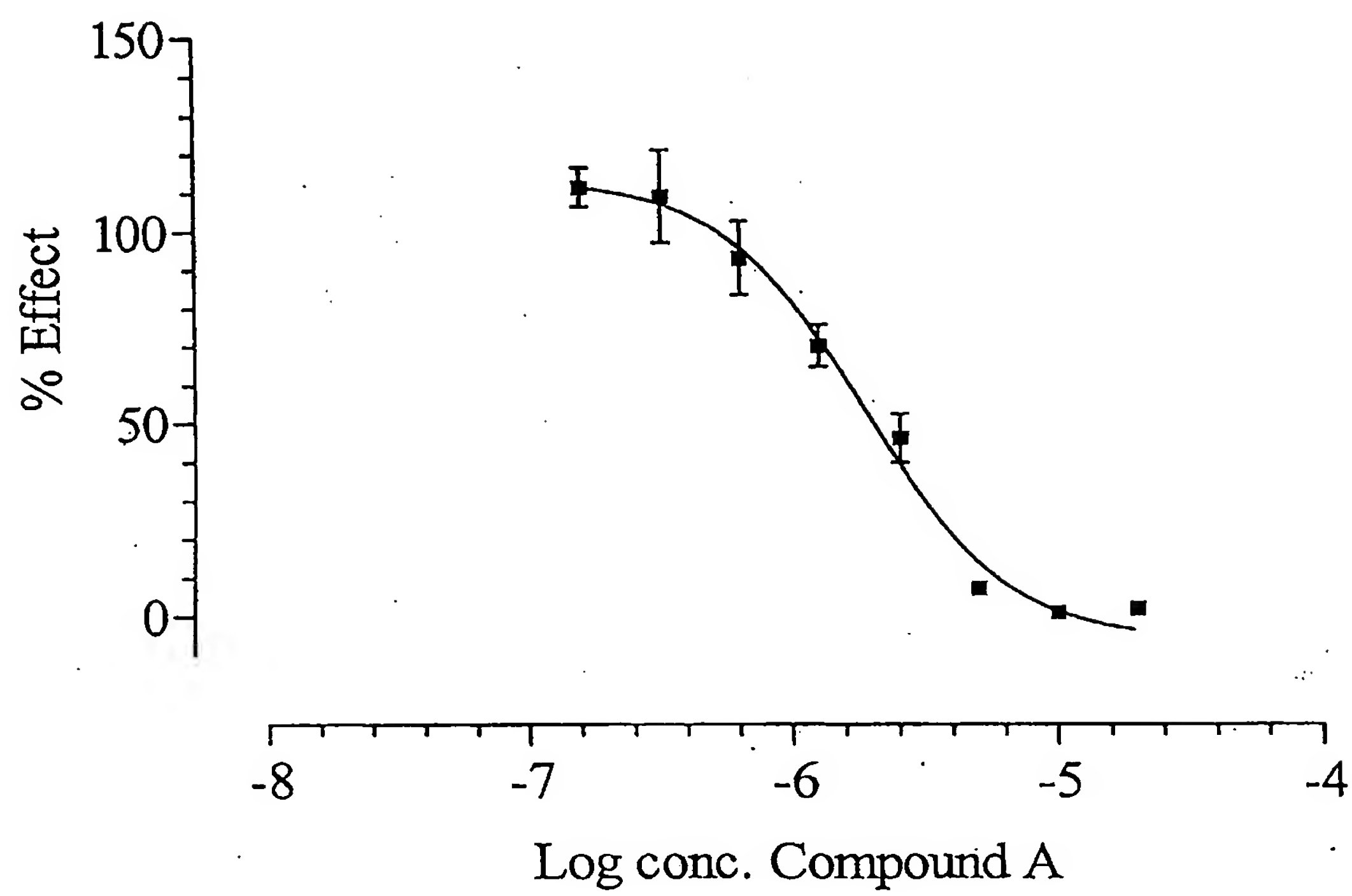


Figure 1